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CALIFORNIA VITAL STATISTICS.

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For the first time in the history of the State, California possesses vital statistics of real utility.* This result has been achieved only after a series of more or less fruitless experiments, covering a period of nearly fifty years, and bearing a marked resemblance, in some details and in general maladroitness, to the registration experiments of a number of other States. For this reason, rather than for any unique features, California's experience may be worth relating.†

Accurate death records would have been of more than ordinary utility for legal purposes in the early years of California's statehood, for the lack of known antecedents in the case of many of the early fortune-seekers frequently led to difficulties in the settlement of estates.‡ Taking advantage of this situation, an enterprising journalist succeeded in getting a registration law enacted in 1858,§ and was appointed State Registrar. Marriages were to be reported by those performing them, births by parents, divorces by those obtaining them, and deaths by sextons. In each case a fee of fifty cents was to accompany the report, which was to be made to the County Recorder. One-third of the income from fees was to be retained by the recorders, one-third was to go to the State Registrar, while the other third was to form a "registration fund" in the State treasury, from which the registrar's salary and the expenses

* Nineteenth Biennial Report of the State Board of Health of California, Sacramento, 1906; Twentieth Biennial Report, 1908.

† The successive Biennial Reports of the State Board of Health have been used as the main sources of information.

‡ Governor's Message of January, 1857, Senate Journal, Eighth Session, p. 43.

§ Statutes of 1858, Ch. 356.

of his office were to be paid. No mechanism was provided for the enforcement of the law, and but few reports were received. The registrar was convinced by two years' experience that his venture was not a lucrative one, and in 1860 the law was repealed, in accordance with his own recommendation.*

The State's second registration law came into being under better auspices. Massachusetts had established the first State Board of Health in 1869, and its example was followed by California in 1870.† The statute establishing the California board did not provide for a registration system, but directed the board to "devise some scheme whereby medical and vital statistics of sanitary value may be obtained." Accordingly, a system of voluntary reports was improvised, circulars and blanks being sent to local officials, physicians, hospitals, public institutions, and even to the various lodges of one fraternal order. The results were, of course, unsatisfactory, and the labor involved was disproportionately great. The board also prepared the draft of a registration act and recommended its enactment.

The plan proposed by the board did not become law, for a code commission was at work on the California statutes. A registration system was one of many features which California borrowed at this time from the laws of New York. By the provisions of the new code,‡ which went into effect in 1873, registers of marriages were to be kept by all persons performing marriages; registers of births, by physicians and midwives; of deaths, by physicians; of funerals, inquests, and burials, by clergymen, coroners, and sextons. Reports were to be made quarterly to the County Recorder. This law seems to have been satisfactory to the State Board of Health, but the returns proved to be too inadequate to be worth printing. The fault was

* The First and Second Annual Reports of the State Registrar of California (1858 and 1859) are among the curiosities of statistical literature. On account of its obvious pecuniary purpose the law was severely criticised by the California newspapers of the day. Nevertheless, at the end of the first year the registration fee was doubled, and the appointment of administrators of estates was added to the facts to be recorded. (Statutes of 1859, Ch. 119.)

† Statutes of 1869-70, Ch. 228.

‡ Political Code of California, 1872, Title vii, Ch. 3.

easily imputed to the "ignorance and apathy of the public." Here, as so frequently in American experience, it was not realized that mere legislative *fiat* will accomplish little, unless it is accompanied by an efficient and centralized administrative system. In default of registration statistics the State Board of Health continued to utilize the reports of mortality in certain localities* obtained from voluntary correspondents,—physicians and, in a few cases, local boards of health. Having tried unsuccessfully to get the registration law amended, the Secretary of the State Board of Health showed a pardonable loss of enthusiasm by recommending that the whole administration of the law, together with the clerical work of tabulation, be shifted to the office of the Secretary of State.†

The registration of births was much less complete even than the registration of deaths. In 1880 the experiment was tried in Sacramento of taking a census of births in connection with the annual school census, and in 1881 it was extended to other parts of the State. Although the results were thought at the time to justify a further development of this system, it is, on the whole, fortunate that no more attempts were made to utilize a method so thoroughly discredited by the experience of the federal census and of several States.‡

In the mean while it was seen that the efficient supervision

* These were at first published monthly in the *Pacific Medical and Surgical Journal*, later in bi-monthly and then in monthly circulars issued by the board. The monthly circulars were reprinted in the Biennial Reports from 1878 to 1902. Annual tables, with classification by sex, age, locality, month, and cause of death, were printed in the Biennial Reports up to 1896. For the years 1892–96 registration records are used in the annual tables in place of the local reports. In general, these statistics are altogether too incomplete to be of use to the investigator, although they throw some light on the relative prominence of certain causes of death.

† The Secretary of State, it seems, would have been in a better position to furnish the proper blanks and record books to those expected to keep registers. An amendment to the registration law, however (Amendments to the Codes, 1877–78, Ch. 239), provided for the distribution of blank registers by the Secretary of the State Board of Health. This change was found to bring little improvement in the operation of the law. An attempt to elicit more thorough co-operation on the part of the County Recorders, by fees paid from the county funds, encountered difficulties in the fact that most of the recorders were limited by law to fixed salaries.

‡ Although some such method may be useful as a means of checking the results of a fairly adequate system of registration of births. Cf. the description of the Michigan system by W. F. Petrie, in the *Quarterly Publications of the American Statistical Association*, vol. x, p. 508.

of registration and sanitation by a State Board with only advisory powers depended almost entirely upon securing the co-operation of local authorities. Local boards of health, it was thought, might co-operate with the State Board in extending and improving the reports of mortality in different localities, in enforcing the registration laws, and in the general furtherance of public hygiene. Local authorities already had the power to follow the example of San Francisco and Sacramento in establishing boards of health.* It was now made their "duty" to do so.† Although fifteen new boards were at once established, the State Board found many of these inclined to "regard themselves as purely local, forgetting that they are parts of a system." It was found, too, that the establishment of a local board of health did not necessarily mean the establishment of an efficient local registration system. In 1882 the State Board reported that many towns and cities had not established registration systems, while of those that had only six required burial permits.

Bills intended to remedy these and other defects of the sanitary code were presented to the legislature in 1887, when they failed to pass, and again in 1889, when a number of important amendments were secured.‡ Interments were forbidden except on permits issued by authorized persons; county authorities were required to establish boards of health or appoint health officers in unincorporated towns; district attorneys could be called upon to prosecute municipal or county officials for failure to appoint boards of health or health officers; and wilful refusal to comply with the burial permit or registration laws was made a penal offence, punishable by imprisonment or

* Political Code of 1872, Sect. 3061. Local boards of health were established by State law in San Francisco and Sacramento prior to the organization of the State Board (Statutes of 1869-70, Chs. 346, 490). Mortality statistics for San Francisco date from 1865, when the local Board of Supervisors established a Health Office, made burial permits mandatory, and required the registration of deaths. (See Report of the Health Officer of San Francisco, 1866.)

† Statutes of 1877-78, Ch. 35. This statute also required the local boards to report all deaths monthly to the State Board, the duplicate registration system being thus recognized by law.

‡ Statutes of 1899, Chs. 26, 29, 38.

a maximum fine of \$1,000. For three successive sessions, bills providing for the payment of fees from the county funds to persons required to keep registers were introduced in the legislature, but for some reason none of these became law.

As an immediate outcome of this legislation the number of local boards of health and health officers rose to over one hundred in 1890, and it appeared that substantial progress was being made toward the development of a fairly adequate registration of deaths. But political changes in 1891 brought about changes in the *personnel* of the State Board of Health. New functions, moreover, had been developed for that body, so that it seems to have battled less strenuously than in earlier years for the cause of vital statistics. At least the enforcement of the law seems to have been left entirely in the hands of local authorities. The operation of the new statutes, however, enabled the board in 1892 to base its "annual tables of deaths," for the first time, on the reports received from the county recorders. The law requiring the registration of births and marriages was virtually inoperative. Mortality returns were received from only about half of the counties in the State, and their publication was wisely discontinued in 1896.*

For over thirty years, then, the California registration system was thoroughly inadequate in principle and in operation. The introduction of new and better laws cannot be credited to any independent development of interest and knowledge within the State: it is to be attributed rather to the well-directed and well-organized efforts of the Division of Vital Statistics of the Bureau of the Census to extend the registration area. California now has a "standard" law† similar in most respects to laws enacted in a number of other States in recent years. "Standard certificates" of deaths (obtained under the burial permit system) are transmitted to the State Registrar through the local registrars of deaths (County Recorders, City Clerks, and Health Officers). Certificates of births and marriages are transmitted

* Save for a perfunctory résumé for the period 1899-1904 in the Eighteenth Biennial Report, p. 24.

† Statutes of 1905, Chs. 110, 119, 346; Statutes of 1907, Ch. 236.

through the County Recorders and the Health Officers of cities organized under "freeholders' charters." Small fees are paid to the local registrars from the public funds.* In the opinion of the State Statistician the reports of deaths and marriages obtained under the new law are fairly complete; but this cannot be said of the registration of births. The Secretary of the State Board of Health is *ex officio* State Registrar, but the law provides for a "Statistician," who has actual charge of the compilation and tabulation of the returns. This office was filled by the appointment of Mr. George D. Leslie, a trained and thoroughly competent statistician.

The new California reports do more than present useful information: they present it in a useful and illuminating way. In this respect they must be ranked among the very best State reports. The tables are accompanied by an adequate explanatory text, in which the more elementary showings of the tables and the inferences that may be made from them are stated with all needed caution. Special emphasis is wisely placed on comparisons and rankings of different localities and regions.

But the real test of reports such as these is, after all, the selection and form of the tables presented. In general, although lack of a sufficient clerical staff enforced rigid economy in this regard, care has been taken to present what most users of such statistics will regard as the more important classifications. The use of tables for the "main and minor geographic divisions" of the State is especially commendable in the case of a State covering so large an area and containing so many distinct physiographic regions as California. It is to be hoped that in future reports the number of general tables can be increased. Marriages ought to be classified by the age of the contracting parties. Births ought to be classified according to the ages of the parents, the duration of marriages, and the number of children previously born of the same mother. This information

* In addition to the officials named, sub-registrars of deaths may be appointed by the County Recorder to receive certificates and issue permits at points remote from the county seat.

is especially desirable in view of the fact that the birth rate is probably lower in California than in any other State.*

In estimating the value of the tabulations of death statistics printed in a State report, it should be remembered that the State report is, or ought to be, part of a national system, including municipal, State, and federal reports. Co-operation between these different branches of our statistical service should not stop with the use of a uniform classification of causes of death. There would be a gain all around if the State reports should show the deaths from each important cause and each class of causes in each "region," county, and city in the respective States, and if the federal reports should develop much farther than at present the classification of deaths by causes and groups of causes in connection with the fundamental facts of sex, age, race, marital condition, rural or urban residence, and occupation. Of course there cannot be an absolute line of division between the work of the two jurisdictions. State registrars should give due attention to the effect of racial differences, for example, while upon the federal office there devolves the duty of making regional comparisons and studies on a broad scale. But the State registration office finds its primary duty (aside from the legal significance of its records) in its relation to the progress of the State and its subdivisions in matters of public hygiene. If this is true, there is thrown upon the federal bureau, as residual claimant, the special duty of contributing to our knowledge of those fundamental social and economic problems upon which mortality statistics throw light. As things now stand, one must sometimes go to the federal reports to ascertain the mortality from a particular disease in a particular locality, and must seek some of the materials upon which important generalizations may be based in the frequently incongruous tables of different State and municipal reports, or, more often, do without them altogether.

* Cf. *Quarterly Publications of the American Statistical Association*, vol. ix, p. 266.